R. Hutson

#7
dw
05/07/01

RAW SEQUENCE LISTING   DATE: 11/28/2000
PATENT APPLICATION: US/09/502,498   TIME: 14:54:34

Input Set : A:\09502498.txt
Output Set: N:\CRF3\11282000\I502498.raw

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 3 <110> APPLICANT: Kilian, Andrzej
 4        Bowtell, David
 7 <120> TITLE OF INVENTION: VERTEBRATE TELOMERASE GENES AND PROTEINS AND USES
 8        THEREOF
10 <130> FILE REFERENCE: 190106.407
12 <140> CURRENT APPLICATION NUMBER: 09/502,498
13 <141> CURRENT FILING DATE: 2000-02-11
15 <150> PRIOR APPLICATION NUMBER: US 09/108,401
16 <151> PRIOR FILING DATE: 1998-06-30
18 <160> NUMBER OF SEQ ID NOS: 155
20 <170> SOFTWARE: PatentIn Ver. 2.0
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 3964
24 <212> TYPE: DNA
25 <213> ORGANISM: Homo sapiens
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30 cgcgggacc cggcggcttt ccgcgcgctg gtggcccagt gcctggtgtg cgtgccctgg 180
31 gacgcacggc cgcccccgc cgcccctcc ttccgccagg tgtcctgcct gaaggagctg 240
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58 ctgtcggaag cagaggtcag gcagcatcgg gaagccaggc ccgccctgct gacgtccaga 1860
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61 ctgttcagcg tgctcaacta cgagcgggcg cggcgccccg gcctcctggg cgcctctgtg 2040
62 ctgggcctgg acgatatcca cagggcctgg cgcaccttcg tgctgcgtgt gcgggcccag 2100
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92 gtgtgccctg tacacaggcg aggaccctgc acctggatgg gggtccctgt gggtcaaatt 3900
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108 Pro Gln Gly Trp Arg Leu Val Gln Arg Gly Asp Pro Ala Ala Phe Arg
109         35                  40                  45
111 Ala Leu Val Ala Gln Cys Leu Val Cys Val Pro Trp Asp Ala Arg Pro
112         50                  55                  60
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115  65                  70                  75                  80
117 Val Ala Arg Val Leu Gln Arg Leu Cys Glu Arg Gly Ala Lys Asn Val
118                  85                  90                  95
120 Leu Ala Phe Gly Phe Ala Leu Leu Asp Gly Ala Arg Gly Gly Pro Pro
121             100                 105                 110
123 Glu Ala Phe Thr Thr Ser Val Arg Ser Tyr Leu Pro Asn Thr Val Thr
124         115                 120                 125
126 Asp Ala Leu Arg Gly Ser Gly Ala Trp Gly Leu Leu Leu Arg Arg Val
127     130                 135                 140
129 Gly Asp Asp Val Leu Val His Leu Leu Ala Arg Cys Ala Leu Phe Val
130 145                 150                 155                 160
132 Leu Val Ala Pro Ser Cys Ala Tyr Gln Val Cys Gly Pro Pro Leu Tyr
133             165                 170                 175
135 Gln Leu Gly Ala Ala Thr Gln Ala Arg Pro Pro His Ala Ser Gly
136             180                 185                 190
138 Pro Arg Arg Arg Leu Gly Cys Glu Arg Ala Trp Asn His Ser Val Arg
139     195                 200                 205
141 Glu Ala Gly Val Pro Leu Gly Leu Pro Ala Pro Gly Ala Arg Arg Arg
142     210                 215                 220
144 Gly Gly Ser Ala Ser Arg Ser Leu Pro Leu Pro Lys Arg Pro Arg Arg
145 225                 230                 235                 240
147 Gly Ala Ala Pro Glu Pro Glu Arg Thr Pro Val Gly Gln Gly Ser Trp
148             245                 250                 255
150 Ala His Pro Gly Arg Thr Arg Gly Pro Ser Asp Arg Gly Phe Cys Val
151             260                 265                 270
153 Val Ser Pro Ala Arg Pro Ala Glu Glu Ala Thr Ser Leu Glu Gly Ala
154     275                 280                 285
156 Leu Ser Gly Thr Arg His Ser His Pro Ser Val Gly Arg Gln His His
157     290                 295                 300
159 Ala Gly Pro Pro Ser Thr Ser Arg Pro Pro Arg Pro Trp Asp Thr Pro
160 305                 310                 315                 320
162 Cys Pro Pro Val Tyr Ala Glu Thr Lys His Phe Leu Tyr Ser Ser Gly
163             325                 330                 335
165 Asp Lys Glu Gln Leu Arg Pro Ser Phe Leu Leu Ser Ser Leu Arg Pro
166             340                 345                 350
168 Ser Leu Thr Gly Ala Arg Arg Leu Val Glu Thr Ile Phe Leu Gly Ser
169         355                 360                 365
171 Arg Pro Trp Met Pro Gly Thr Pro Arg Arg Leu Pro Arg Leu Pro Gln
172     370                 375                 380
174 Arg Tyr Trp Gln Met Arg Pro Leu Phe Leu Glu Leu Leu Gly Asn His
175 385                 390      .          395                 400
177 Ala Gln Cys Pro Tyr Gly Val Leu Leu Lys Thr His Cys Pro Leu Arg
178             405                 410                 415
180 Ala Ala Val Thr Pro Ala Ala Gly Val Cys Ala Arg Glu Lys Pro Gln
181             420                 425                 430
183 Gly Ser Val Ala Ala Pro Glu Glu Glu Asp Thr Asp Pro Arg Arg Leu
184         435                 440                 445
186 Val Gln Leu Leu Arg Gln His Ser Ser Pro Trp Gln Val Tyr Gly Phe
```

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187      450                    455                    460
189 Val Arg Ala Cys Leu Arg Arg Leu Val Pro Pro Gly Leu Trp Gly Ser
190 465     ·              470              475                    480
192 Arg His Asn Glu Arg Arg Phe Leu Arg Asn Thr Lys Lys Phe Ile Ser
193                485                    490                    495
195 Leu Gly Lys His Ala Lys Leu Ser Leu Gln Glu Leu Thr Trp Lys Met
196                500                    505                    510
198 Ser Val Arg Asp Cys Ala Trp Leu Arg Arg Ser Pro Gly Val Gly Cys
199         515                    520                    525
201 Val Pro Ala Ala Glu His Arg Leu Arg Glu Glu Ile Leu Ala Lys Phe
202         530                    535                    540
204 Leu His Trp Leu Met Ser Val Tyr Val Val Glu Leu Leu Arg Ser Phe
205 545                    550                    555                    560
207 Phe Tyr Val Thr Glu Thr Thr Phe Gln Lys Asn Arg Leu Phe Phe Tyr
208                565                    570                    575
210 Arg Lys Ser Val Trp Ser Lys Leu Gln Ser Ile Gly Ile Arg Gln His
211                580                    585                    590
213 Leu Lys Arg Val Gln Leu Arg Glu Leu Ser Glu Ala Glu Val Arg Gln
214         595                    600                    605
216 His Arg Glu Ala Arg Pro Ala Leu Leu Thr Ser Arg Leu Arg Phe Ile
217         610                    615                    620
219 Pro Lys Pro Asp Gly Leu Arg Pro Ile Val Asn Met Asp Tyr Val Val
220 625                    630                    635                    640
222 Gly Ala Arg Thr Phe Arg Arg Glu Lys Arg Ala Glu Arg Leu Thr Ser
223                645                    650                    655
225 Arg Val Lys Ala Leu Phe Ser Val Leu Asn Tyr Glu Arg Ala Arg Arg
226                660                    665                    670
228 Pro Gly Leu Leu Gly Ala Ser Val Leu Gly Leu Asp Asp Ile His Arg
229         675                    680                    685
231 Ala Trp Arg Thr Phe Val Leu Arg Val Arg Ala Gln Asp Pro Pro Pro
232         690                    695                    700
234 Glu Leu Tyr Phe Val Lys Val Asp Val Thr Gly Ala Tyr Asp Thr Ile
235 705                    710                    715                    720
237 Pro Gln Asp Arg Leu Thr Glu Val Ile Ala Ser Ile Ile Lys Pro Gln
238                725                    730                    735
240 Asn Thr Tyr Cys Val Arg Arg Tyr Ala Val Val Gln Lys Ala Ala His
241                740                    745                    750
243 Gly His Val Arg Lys Ala Phe Lys Ser His Val Ser Thr Leu Thr Asp
244         755                    760                    765
246 Leu Gln Pro Tyr Met Arg Gln Phe Val Ala His Leu Gln Glu Thr Ser
247         770                    775                    780
249 Pro Leu Arg Asp Ala Val Val Ile Glu Gln Ser Ser Ser Leu Asn Glu
250 785                    790                    795                    800
252 Ala Ser Ser Gly Leu Phe Asp Val Phe Leu Arg Phe Met Cys His His
253                805                    810                    815
255 Ala Val Arg Ile Arg Gly Lys Ser Tyr Val Gln Cys Gln Gly Ile Pro
256         820                    825                    830
258 Gln Gly Ser Ile Leu Ser Thr Leu Leu Cys Ser Leu Cys Tyr Gly Asp·
259         835                    840                    845
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264 Arg Leu Val Asp Asp Phe Leu Leu Val Thr Pro His Leu Thr His Ala
265 865             870               875               880
267 Lys Thr Phe Leu Arg Thr Leu Val Arg Gly Val Pro Glu Tyr Gly Cys
268             885               890               895
270 Val Val Asn Leu Arg Lys Thr Val Val Asn Phe Pro Val Glu Asp Glu
271         900               905               910
273 Ala Leu Gly Gly Thr Ala Phe Val Gln Met Pro Ala His Gly Leu Phe
274         915               920               925
276 Pro Trp Cys Gly Leu Leu Leu Asp Thr Arg Thr Leu Glu Val Gln Ser
277     930               935               940
279 Asp Tyr Ser Ser Tyr Ala Arg Thr Ser Ile Arg Ala Ser Leu Thr Phe
280 945               950               955               960
282 Asn Arg Gly Phe Lys Ala Gly Arg Asn Met Arg Arg Lys Leu Phe Gly
283             965               970               975
285 Val Leu Arg Leu Lys Cys His Ser Leu Phe Leu Asp Leu Gln Val Asn
286         980               985               990
288 Ser Leu Gln Thr Val Cys Thr Asn Ile Tyr Lys Ile Leu Leu Leu Gln
289         995               1000              1005
291 Ala Tyr Arg Phe His Ala Cys Val Leu Gln Leu Pro Phe His Gln Gln
292     1010              1015              1020
294 Val Trp Lys Asn Pro Thr Phe Phe Leu Arg Val Ile Ser Asp Thr Ala
295 1025              1030              1035              1040
297 Ser Leu Cys Tyr Ser Ile Leu Lys Ala Lys Asn Ala Gly Met Ser Leu
298             1045              1050              1055
300 Gly Ala Lys Gly Ala Ala Gly Pro Leu Pro Ser Glu Ala Val Gln Trp
301         1060              1065              1070
303 Leu Cys His Gln Ala Phe Leu Leu Lys Leu Thr Arg His Arg Val Thr
304     1075              1080              1085
306 Tyr Val Pro Leu Leu Gly Ser Leu Arg Thr Ala Gln Thr Gln Leu Ser
307     1090              1095              1100
309 Arg Lys Leu Pro Gly Thr Thr Leu Thr Ala Leu Glu Ala Ala Ala Asn
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313             1125              1130
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317 <211> LENGTH: 1031
318 <212> TYPE: PRT
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321 <400> SEQUENCE: 3
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326             20                25                30
328 Trp Ile Gln Lys Val Ile Arg Cys Arg Asn Gln Ser Gln Ser His Tyr
329         35                40                45
331 Lys Asp Leu Glu Asp Ile Lys Ile Phe Ala Gln Thr Asn Ile Val Ala
332     50                55                60
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VERIFICATION SUMMARY   DATE: 11/28/2000
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Input Set : A:\09502498.txt
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L:1360 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34
L:3368 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51
L:9331 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:91
L:9368 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:93
L:9410 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:95
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